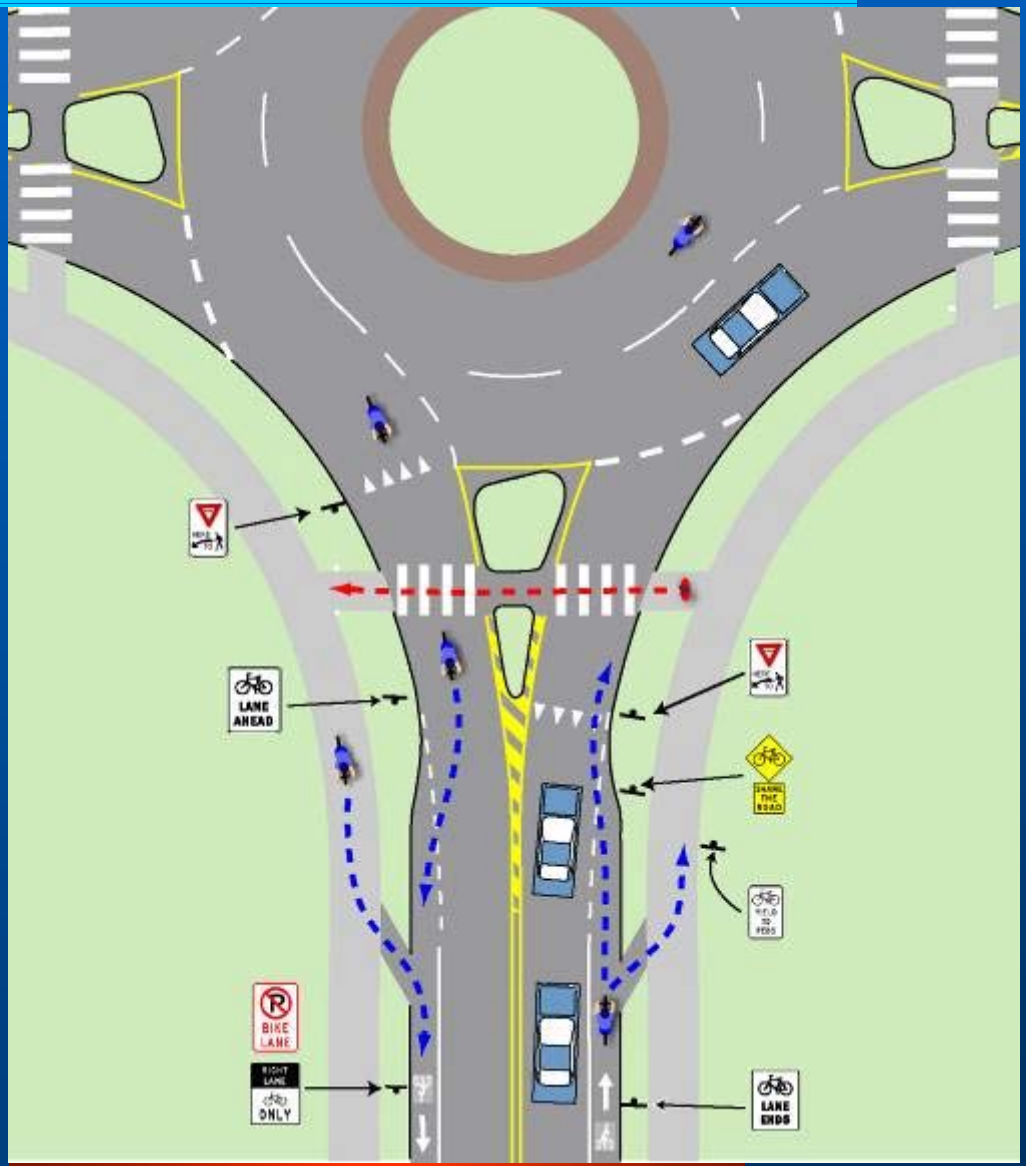
Bikes & Pedestrians at Intersections

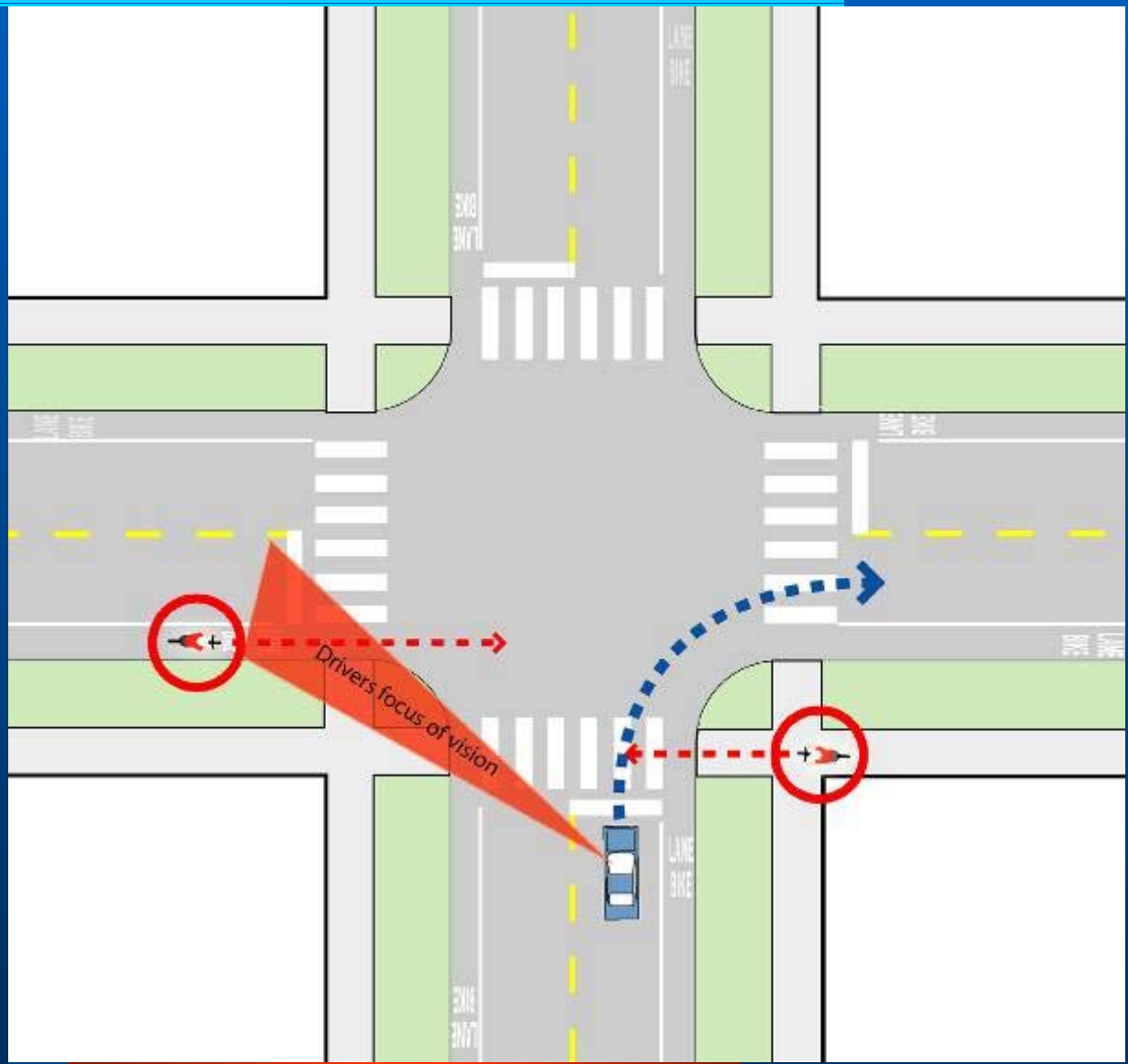


- Allow Bicyclists to Self-Sort
- Refuge Islands for Pedestrians

Sidewalk Bicycling

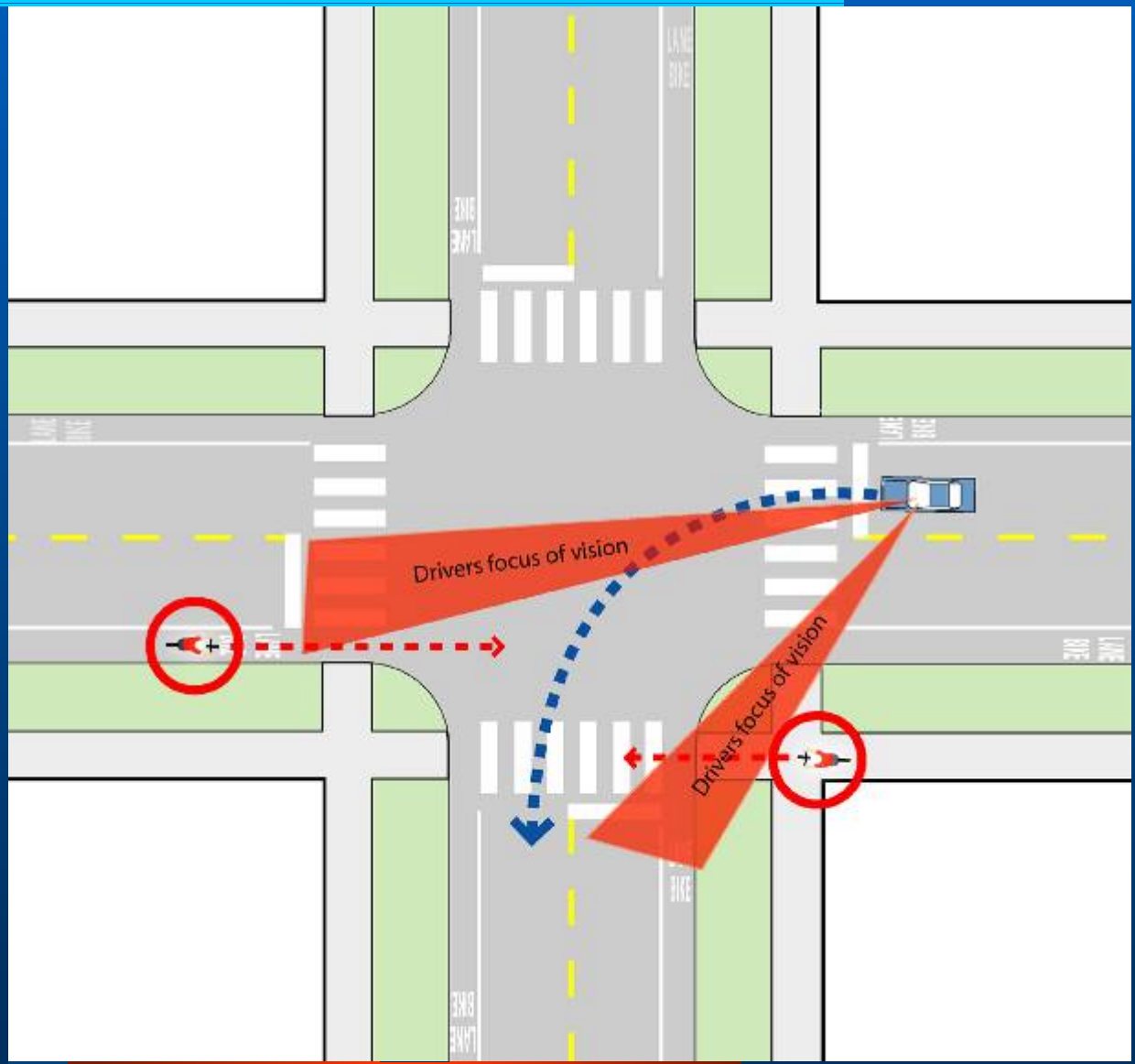
- Cause of Perhaps Half of All Crashes
- Conflicts with Pedestrians
- Key Factors:
  - Intersecting Streets
  - Intersecting Driveways
  - Relation to Traffic Flow
  - Setback From Roadway

Sidewalk Bicycling



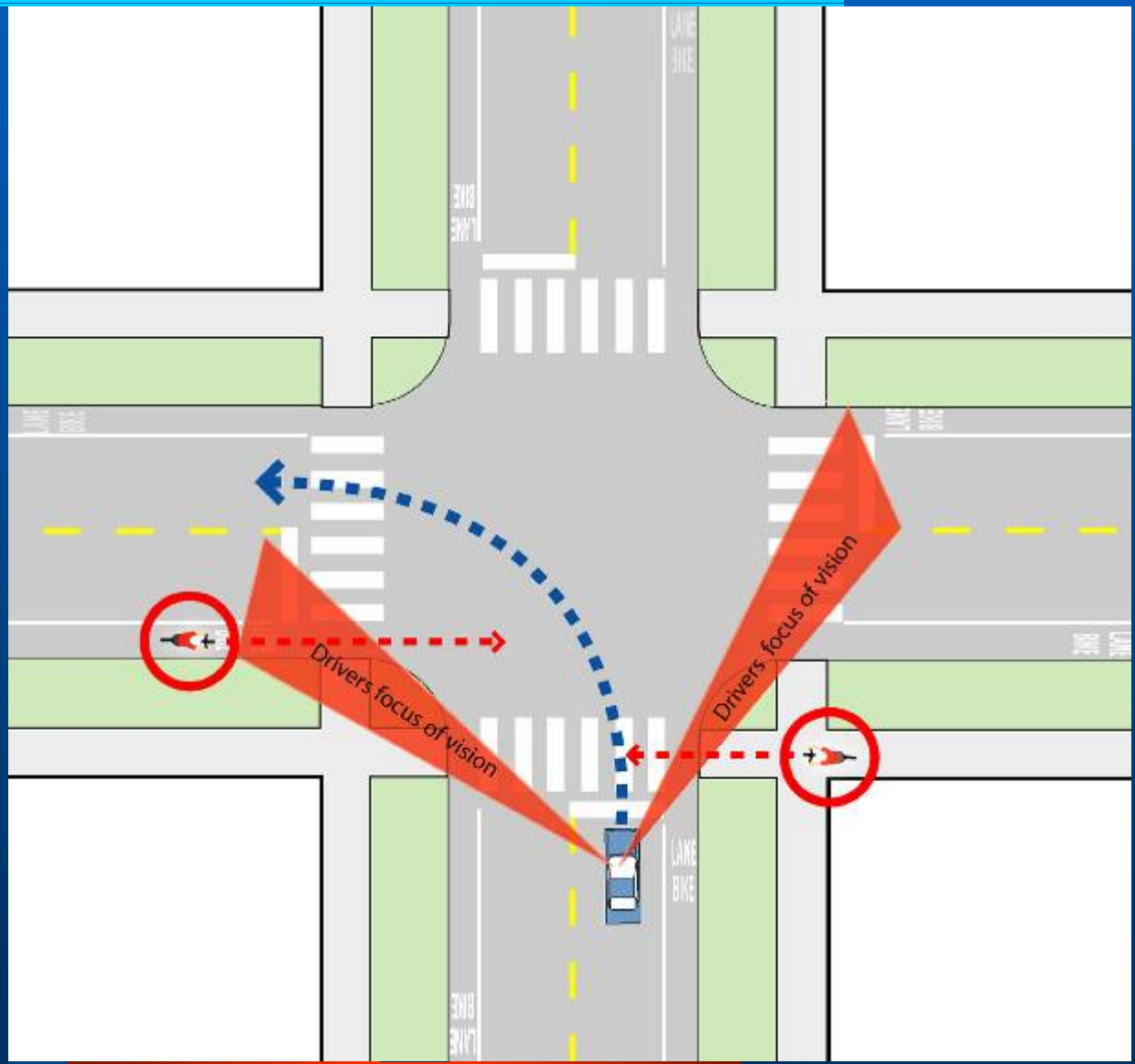
Bicyclist riding with traffic in the roadway vs. bicyclist riding against traffic on the sidewalk with a right turning car

Sidewalk Bicycling



Bicyclist riding with traffic in the roadway vs. bicyclist riding against traffic on the sidewalk with a left turning car

Sidewalk Bicycling

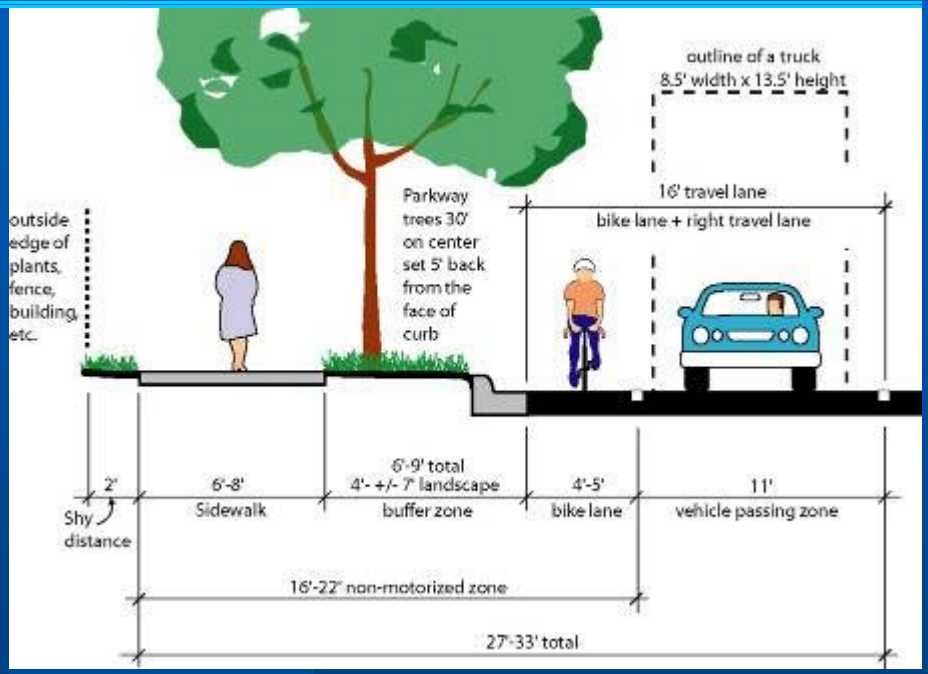


Bicyclist riding with traffic in the roadway vs. bicyclist riding against traffic on the sidewalk with a left turning car

Wrong Way Bicycling

- Many Believe this is The Correct “Safe” way to Bike
  - No Education
  - No Signage
- Especially Problematic at Intersections
  - Poor Visibility

Bike Lanes



- Designated Lane in Roadway for Bikes
- Sidewalk for Pedestrians and Young Children on Bikes

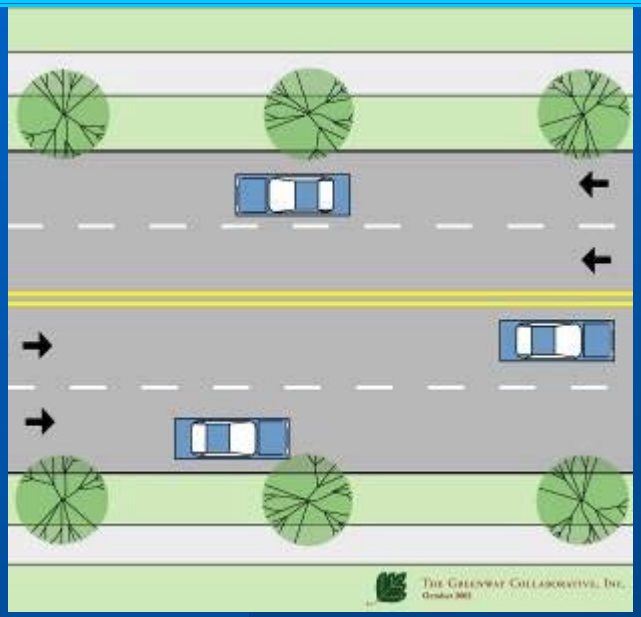
- Current Best Practice
- Recommended Under Most Circumstances on Collectors and Arterials
- Motorists Expect Bikes

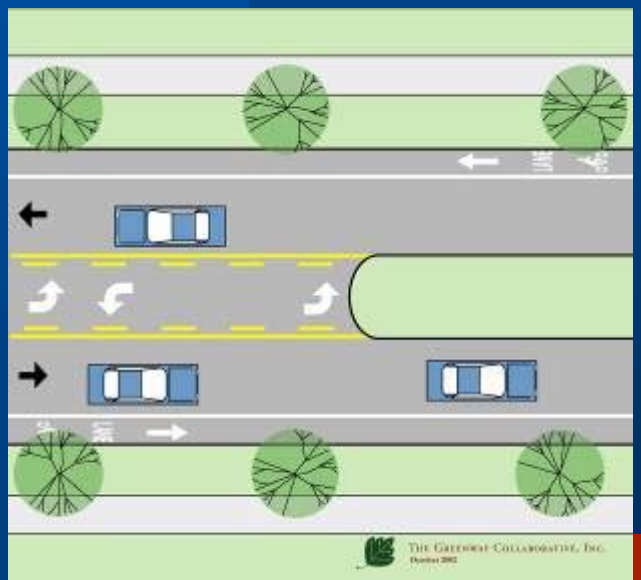
Bike Lanes

- More Efficient Travel
- Reduce Ped. Conflicts
- Can Pass Stopped Traffic
- Easier Motor Vehicle Turns Into and Out of Driveways
- Vehicular Lanes Farther Away From Trees
- Motor Vehicle Recovery Area

Research has shown that in most cases bicyclists are safer using in-road bike lanes than riding on the sidewalk

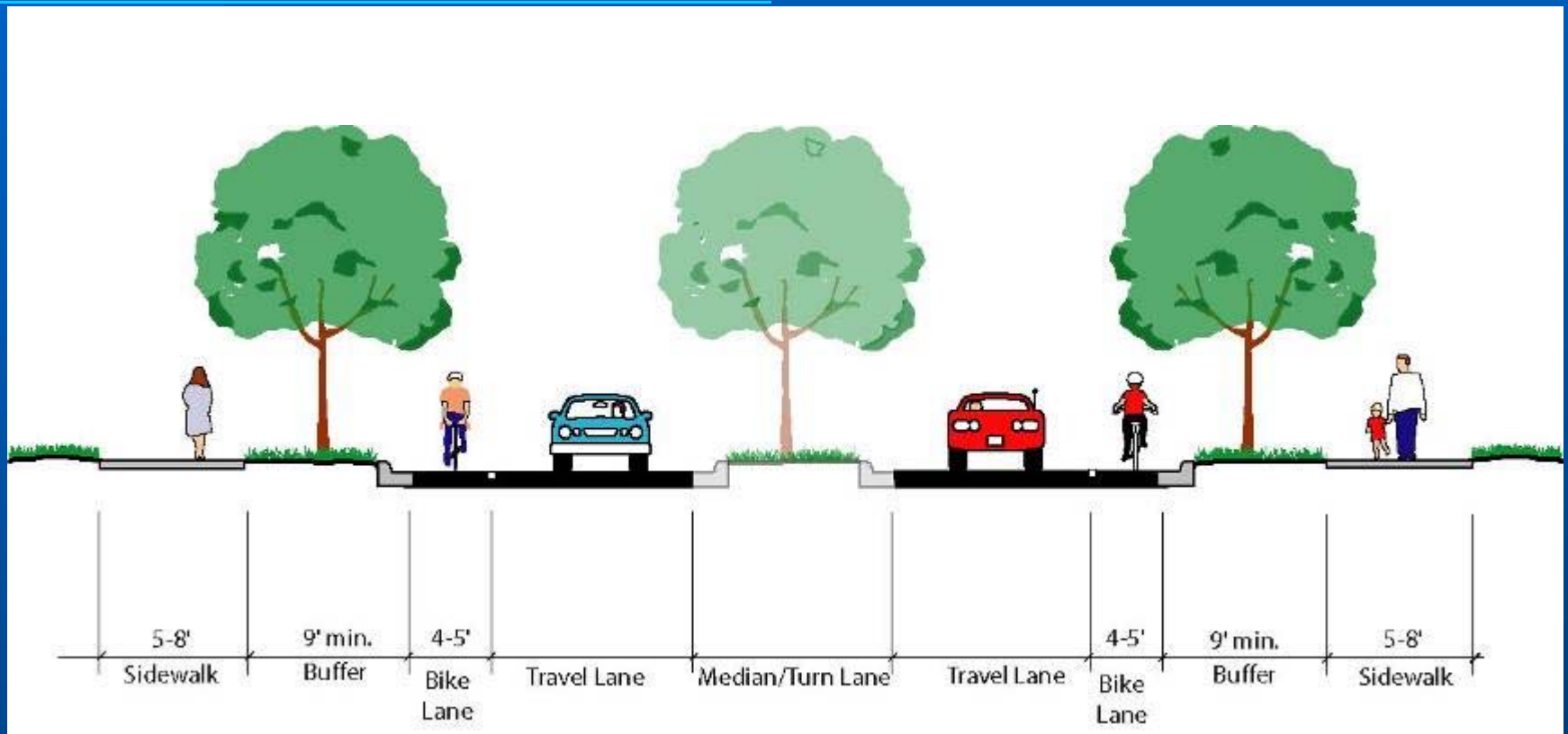
Four to Three Lane Road Conversions





- Lane Weaving Issue with 4-Lane Roads
- Research Shows No Loss in Vehicular LOS up to 1,750 VPH
- Used on Roads Up to 24,000 VPD
- Reduction in 85% Speed by about 5 MPH
- Dramatic Reductions in Crashes and Excessive Speeding

Three Lane Roads



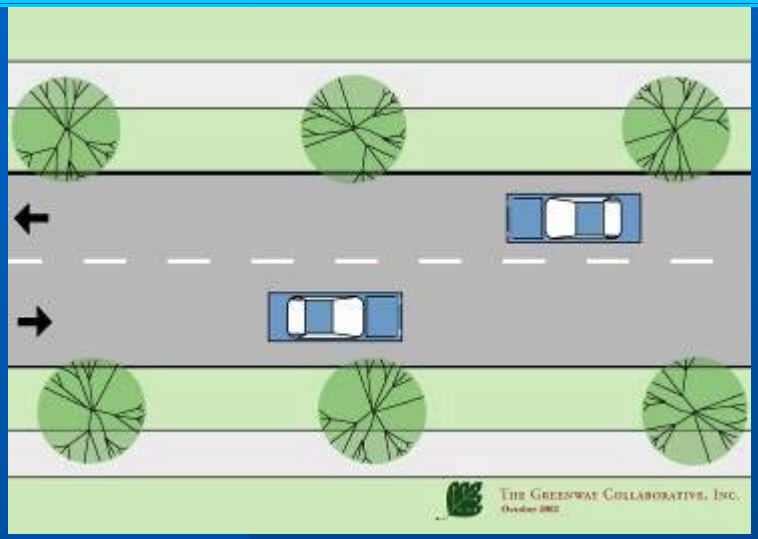
Quality/Level of Service:

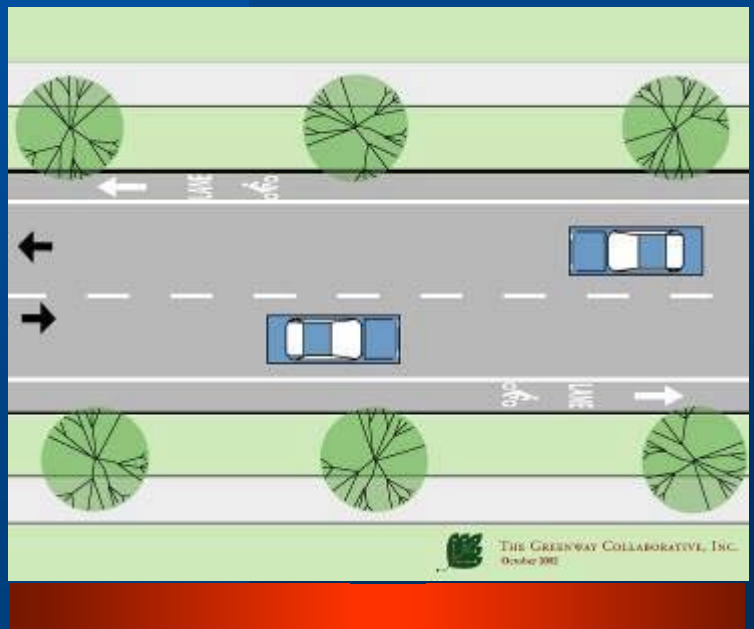
Pedestrian Q/LOS C

In-Road Bike Q/LOS C

Three Lane Roads

Lane Narrowing



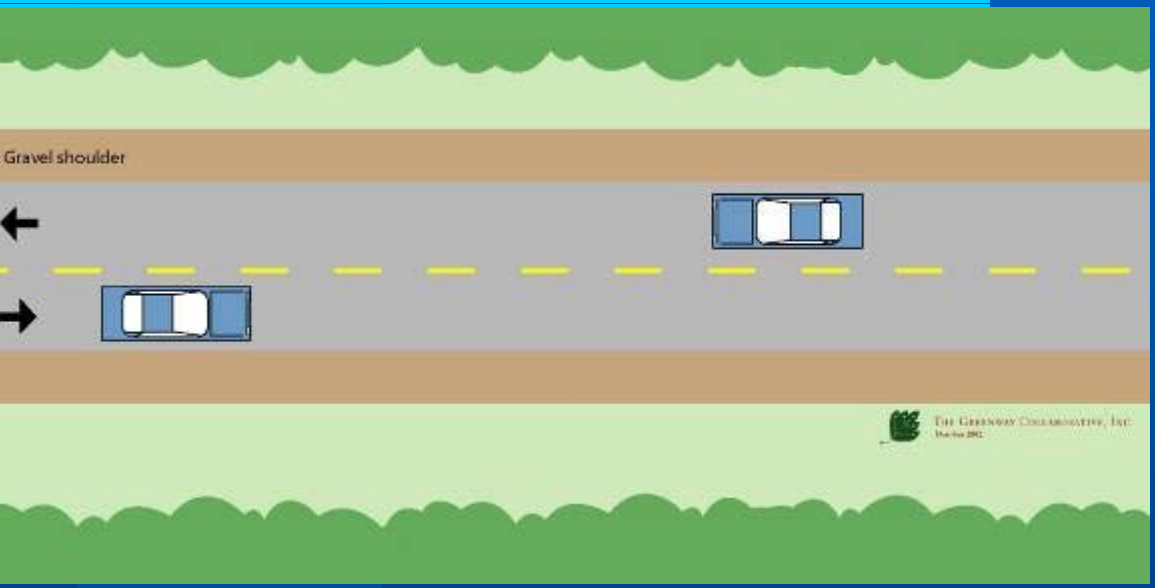


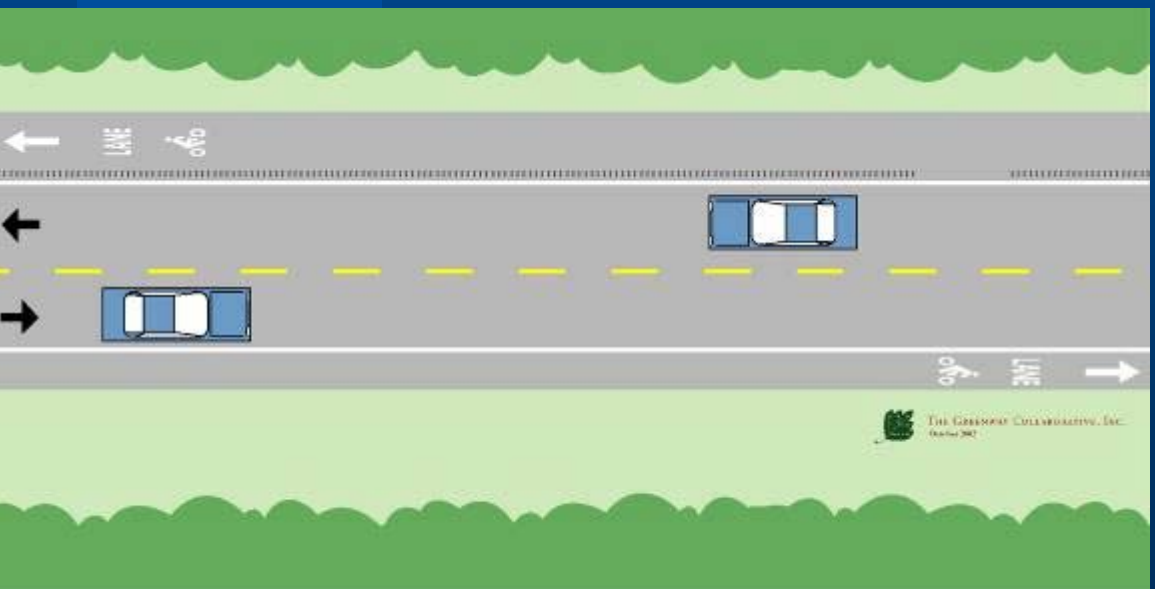
- 11’ Preferable, 10’ Acceptable in Some Cases
- Provides a Buffer Between the Outside Travel Lane and the Curb – better for trees
- Easier Turns Into and Out of Driveways

Lane Width Examples

Lane Width Examples

Paving Shoulders





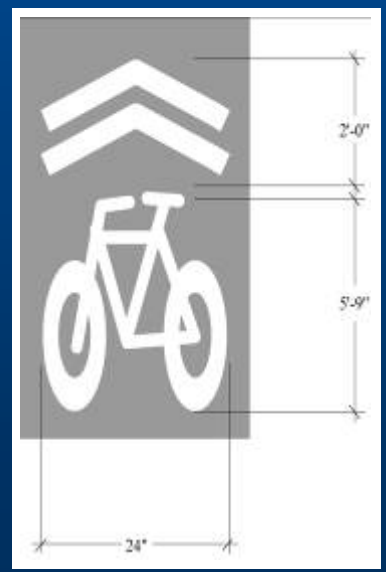
- Improved Roadway From Motor Vehicle and Maintenance Standpoint
- Inclusion of Rumble Strips Requires Additional Width And Gaps As Appropriate

Paving Shoulders

Shared-Use Arrow

Experimental:

- **For Motorists**
  - **Expect Bikes**
- **For Bicyclists**
  - **Ride with Traffic**
  - **Safe Riding Position**



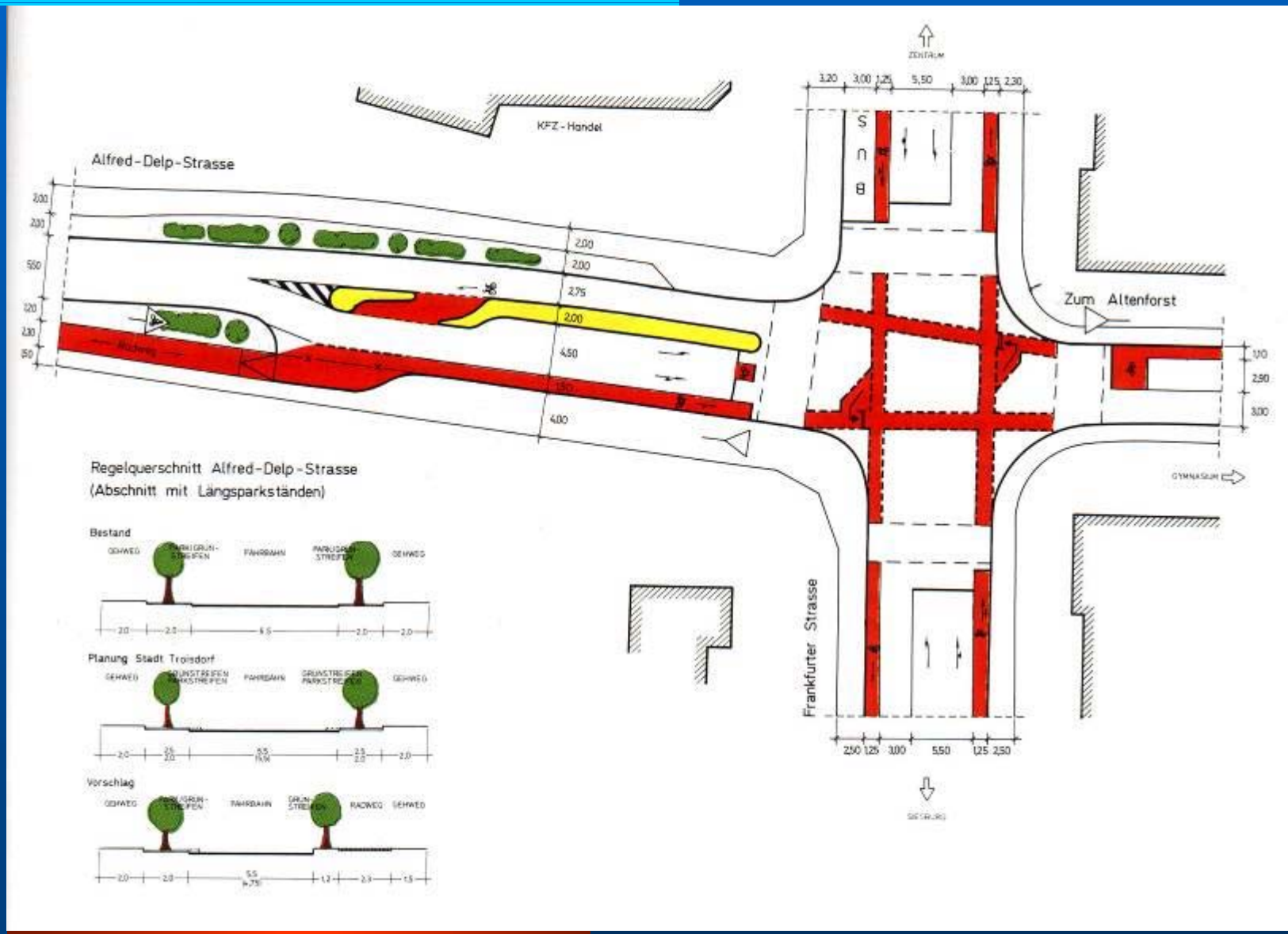
Variations include “Bike in House” design

Sidewalk Bikeways

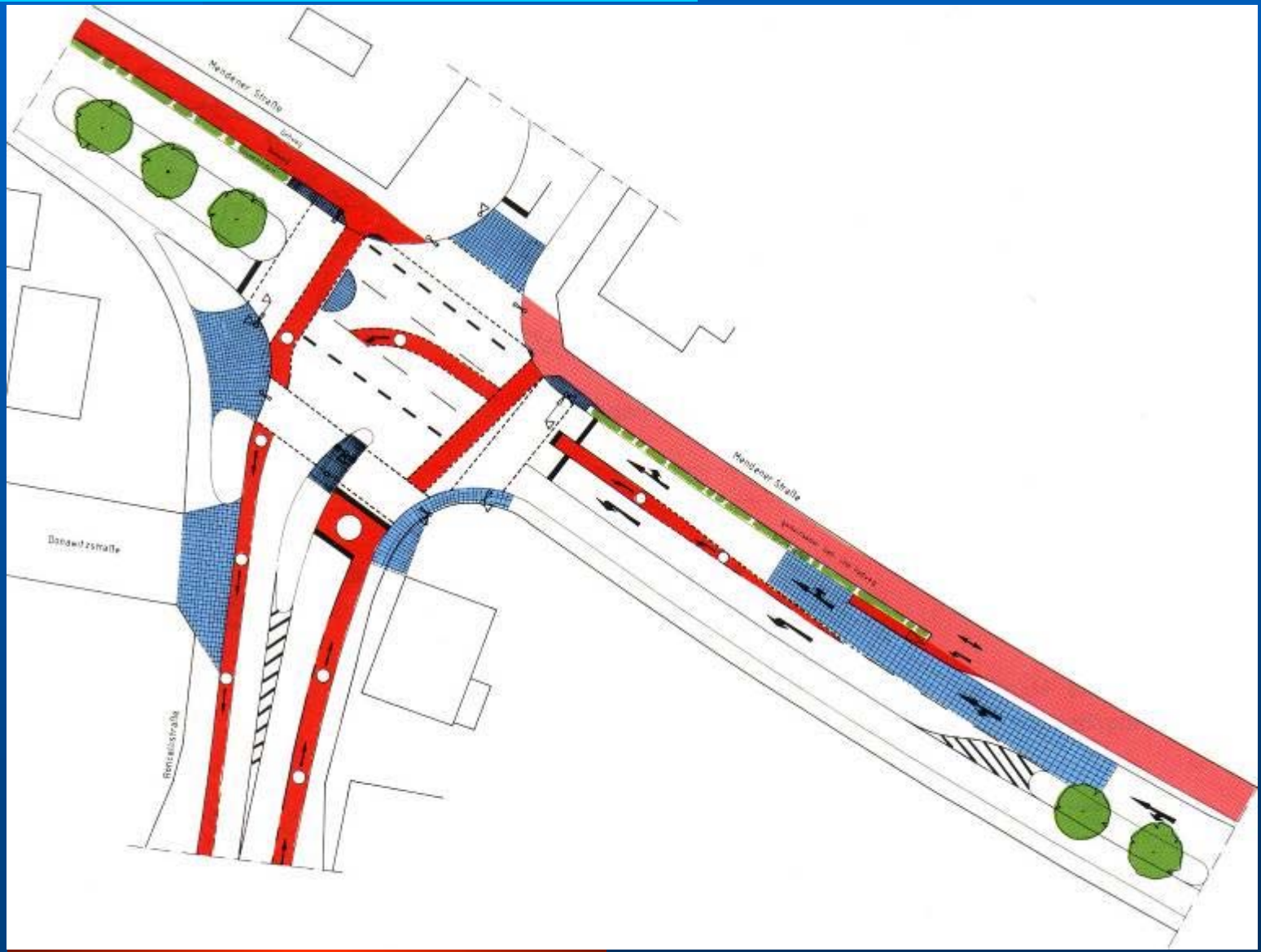
AASHTO considers Sidewalk Bikeways are unsatisfactory except under limited circumstances:

- **Along high speed or heavily traveled roadways having inadequate space for bicycles AND uninterrupted by driveways and intersections for long distances**
- **On long, narrow bridges**

Sidewalk Bikeway End Points



Sidewalk Bikeway End Points



Vision Impaired Crossing Streets

- **Significant Loss of Independence Since 1976**
  - **Right-on-Red**
  - **Actuated Signals**
  - **Curb Ramps**

Audible Signals and Detectable Warning Strips are Simply Trying to Reclaim Lost Ground

Theme 4 – Changing Market Place

Changing Markets

- Our Customers Tastes Are Changing
- “Cool” Cities Campaign
- People are Demanding a Different Environment

People Change States Like They Change Stores

Changing Markets

Changing Markets